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ABSTRACT

Job success and steady work are more important to students today than making a lot of money; moreover, the values students place on job success, steady work, and making money diminish as students progress through high school and enter college and the world of work. These findings are based on the longitudinal study High School and Beyond (HS&B), sponsored by the National Center for Education Statistics. Estimates are based on responses to questionnaires by HS&B high school sophomores in 1980 and on responses to follow-up questionnaires in 1982, 1984, and 1986. Some of the highlights of the study are as follows: (1) about 82 percent of students rate job success and steady work as being very important; (2) about 33 percent rate making a lot of money as very important; (3) the 1980 high school sophomore group is more concerned than a 1972 national group with being well-off financially and with making a lot of money; (4) the importance students place on these job-related goals declines as the students grow older; and (5) high school graduates and college students are more likely than high school dropouts to say that job success and steady work are important. The study includes comparisons by subcategories such as race/ethnicity and gender; the report contains extensive statistical data. (KC)

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Survey Report September 1988

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Students Report Job Success More Important than Making Money

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Job success and steady work are more important to students today than making a lot of money. Moreover, the values students place on job success, steady work, and making money diminish as students progress through high school and enter college and the world of work. These findings are based on the longitudinal study High School and Beyond (HS&B), which is sponsored by the National Center for Education Statistics (NCES). Estimates are based on responses to questionnaires by HS&B high school sophomores in 1980 and on responses to followup questionnaires in 1982, 1984, and 1986.

Highlights

- About 82 percent of students rate job success and steady work as being very important.
- About 33 percent rate making a lot of money as very important.
- The 1980 high school sophomore group is more concerned than a 1972 national group with being well-off financially and with making a lot of money.
- There appears to be a maturation effect—the importance placed on these job-related goals declines as the students grow older.
- High school graduates and college students are more likely than high school dropouts to say that job success and steady work are important.

This NCES survey report describes student views on the importance of three job-related goals—being successful at work, finding steady work, and making a lot of money. It looks at changes, as 1980 sophomores graduate from high school (or drop out) and go on to work or college, over a period of 6 years (1980-1986). Comparisons are made by subcategories such as race/ethnicity and gender. A discussion of the findings is followed by a methodology and technical notes section which includes regression tables, means and adjusted mean tables, item and sampling information, details on regression analyses conducted, and a discussion of the accuracy of estimates.

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General Trends--Importance of Work-Related Goals

The findings on an increased concern with financial well-being are consistent with a trend showing college students in the 1980s to be more concerned than students in the 1960s with being well-off financially. For example, a 20-year trend report (*The American Freshman: Twenty Year Trends, 1966-1985*: ACE, 1986) shows that college freshmen have become more concerned with "being well-off financially." In 1985, 71 percent of freshmen agreed that this was essential or very important, compared with only 44 percent in 1966. This study is not longitudinal, however, and is not comparable with the HS&B database. Other studies have also identified this trend.

The National Longitudinal Study (NLS) of the High School Class of 1972 and the HS&B 1980 study asked participants some of the same questions regarding the importance of each of 12 goals. The questions discussed here are (1) "being successful in my line of work," (2) "having lots of money," and (3) "being able to find steady work." Response choices included not important, somewhat important, and very important. All three of these job-related goals are connected to a general concern with being well-off financially. In 1972, 18 percent of NLS students (then high school seniors) said making a lot of money was very important. In comparison, in 1982, 33 percent of the HS&B seniors (HS&B sophomores in 1980) said this goal was very important. In 1972, 85 percent of NLS students said job success was very important, while in 1982, 84 percent of the HS&B seniors said job success was very important. In 1972, 78 percent of NLS students said steady work was very important, while in 1982, 84 percent of HS&B students said steady work was very important.

The NCES report (1981) *A Capsule Description of High School Students* found that "being successful in my line of work" and "being able of find steady work" were rated as more important than seven other life goals (88 and 84 percent, respectively). The 1980 high school senior group was less concerned about having lots of money (only 31 percent rated it as very important). These 1980 seniors, however, placed greater importance than the NLS seniors in 1972 on "having lots of money." In addition, "working to correct social and economic inequalities" was less often viewed as important by 1980 seniors compared with 1972 seniors (13 percent and 27 percent). To the extent that today's students are more concerned than students of the past with making money and getting ahead on their jobs, educational and career decisions will be affected.

Although students in the 1980s may be more concerned with being well-off financially compared with students in the 1960s and early 1970s, they rank job success and steady work as much more important than making a lot of money. Here it is important to distinguish the increased general concern with being well-off financially from the relatively low value students place on making money relative to job success.

Although we have grounds for believing that the differences found are valid, caveats are needed. First, it is possible that students may differ in their definitions of "job success" and "making a lot of money." Job success may mean different things to poor children and to prosperous children. The level of income necessary to be considered "making a lot of money" probably varies. To one student, $50,000 a year could be an astronomical amount of money; to another it could be a minimal standard of living. Thus, the dependent variables used here are not absolute, but relativistic to each individual. In addition, how a person views "making a lot of money" and "having job success" changes over time as he or she matures.

Second, although some social psychologists (see, for example, Rokeach) have proposed models revolving around student belief systems, this paper does not propose a theoretical model on the influence of background characteristics on student work-related beliefs. Thus, drawing inferences as to reasons for beliefs or theorizing about relationships would

be problematic. The objective in this report is to identify which individual background characteristics were related to views on job success and making money. Variables not measured by HS&B (such as degree of motivation and drive possessed by a student) may be more potent predictors of such beliefs.

Third, since there are hazards in reporting statistical tests for each comparison (see methodology and technical notes for discussion), a multivariate regression model was used. Effectively, this controls error rates and enables judgments on the existence of real differences among groups.

Recent data from the HS&B study show that students view job success as being more important than making a lot of money (table 1, page 4). For example, in 1986, 81 percent of high school graduates rated job success as very important, compared with 21 percent rating making a lot of money as very important ($p<.01$). In table 1, the "high school graduate" group comprises students who obtained their high school diplomas in 1982 (about 79 percent). The "high school dropout" group incorporates students who may have returned and obtained a diploma or GED, those who returned to high school but did not obtain a diploma, and those who dropped out and never returned (about 20 percent total).

In all 4 years, high school graduates were more likely than high school dropouts to say that being a success and having steady work were very important. For example, in 1986, 81 percent of high school graduates said being a success was very important compared with 75 percent of dropouts ($p<.01$). In 1986, 28 percent of high school dropouts said making money was very important, compared with 21 percent of high school graduates ($p<.01$). In general, patterns are similar for high school dropouts and for high school graduates.

As they matured, the value 1980 high school sophomores placed on job success, having steady work, and making a lot of money declined. Importance ratings between 1980-1986 fell 12 percent on making money, 6 percent on job success, and 5 percent on having steady work (table 1).

Interestingly, although student ratings showed steady declines over the four time points in the value placed on making a lot of money, such steady declines were not evident for job success and steady work. For these two values, virtually all the decline took place between 1984 and 1986 (figures 1 and 2, page 4). This is the period 2 to 4 years after high school graduation. This trend may be related to improvements in the economy. In other words, as the economy improves, respondents may become less concerned with finding and keeping well-paying jobs.

Although small declines over time were seen in the HS&B database for job success and steady work, a larger decline was shown by the NLS-72 group ratings for job success. The major difference in trends between the NLS-72 group and the HS&B 1980 group is that the NLS-72 seniors were consistent over time in the low value they placed on making money, ranging from 13 to 18 percent. HS&B students placed a higher value on making money than the NLS-72 group, but the values declined over time.

Patterns Over Time

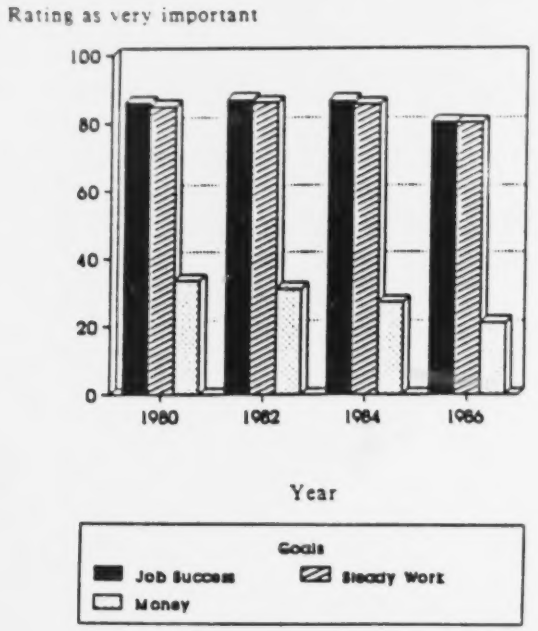
The previous section described general trends for 1980-1986 in ratings of job-related goals, and characteristics associated with job-related beliefs. Another way to look at trends is to calculate different student patterns over time in rating the importance of a goal. Basically, students' ratings over time will be consistent, inconsistent, increase, or decrease.

Table 1.-- Percentage of 1980 high school sophomores who rated goals as very important, in 1980, 1982, 1984 and 1986, by high school graduation status.

	High school dropout				High school graduate			
Goal	1980	1982	1984	1986	1980	1982	1984	1986
Success	78.1 (1.21)	80.9 (1.17)	79.7 (1.17)	75.2 (1.30)	86.1 (0.47)	86.9 (0.46)	86.7 (0.44)	80.5** (0.53)
Steady work	81.1 (1.17)	80.6 (1.15)	81.4 (1.15)	77.9** (1.30)	84.9 (0.48)	86.1 (0.45)	85.6 (0.45)	80.2** (0.53)
Money	40.3 (1.44)	36.3 (1.43)	34.8 (1.34)	28.4** (1.41)	33.4 (0.65)	31.1 (0.66)	27.1 (0.59)	21.1** (0.57)

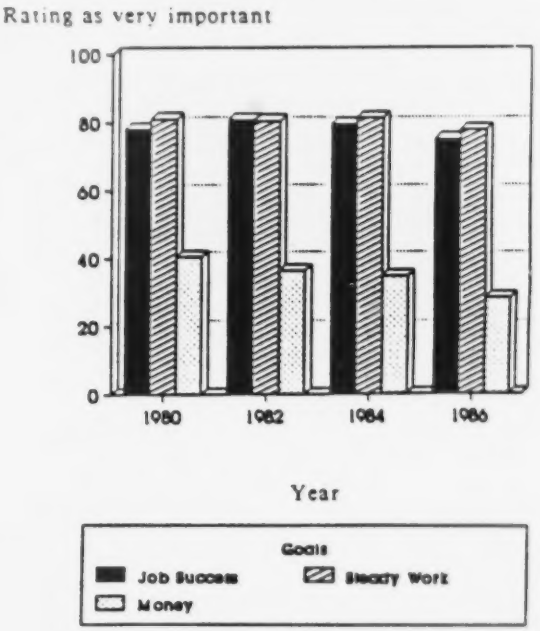
* Denotes the confidence in the comparison of the 1986 estimate with the 1980 estimate. Flagged entries are significant at the .01 level.
NOTE: Standard errors are in parentheses.
SOURCE: HS&B Base Year (1980), 1st followup (1982), 2nd followup (1984) and 3rd followup (1986).

Figure 1.--Percentage of high school dropouts rating values very important



SOURCE: HS&B 1980, 1982, 1984, 1986

Figure 2.--Percentage of high school graduates rating values very important



SOURCE: HS&B 1980, 1982, 1984, 1986

As seen in table 2, (page 6) there are six basic rating patterns. Three patterns are in the "consistent" category (those who give a goal the same rating over the years)--not important, somewhat important, and very important. The "decrease" category are those whose value ratings go down, and the "increase" category are those whose value ratings rise over time. The "inconsistent" category are those whose ratings go up and down. Patterns for college students and students not enrolled in college were similar. Findings discussed are for those who were enrolled as college students in 1982.

The value ratings of college students declined by 21 percent over the 6 years in rating making money important, 9 percent in rating the importance of job success ($p<.01$), and 11 percent in rating steady work important ($p<.01$) (table 2).

On the importance of job success, 67 percent of college students were consistent over time in rating it as very important. About 9 percent increased or decreased. Most college students (70 percent) also were consistent over time in agreeing that steady work was very important.

College students were less consistent and more moderate in their beliefs about the importance of making a lot of money, when compared with other job-related beliefs. They were varied in their responses to the making money question: 28 percent stayed the same in saying money was somewhat important, 1 percent consistently said it was not important, 13 percent stayed the same in saying it was very important, 21 percent decreased in the rating of its importance, and 16 percent increased (figures 3 and 4, page 6).

Student Characteristics as Related to Importance Placed on Job Success and Making Money

As the job success and steady work questions showed similar patterns, and basically refer to the importance placed on job success, the importance given by students to both of these questions was averaged for the first dependent variable--percentage rating job success as very important. The percentage of students who rated making a lot of money very important was the second dependent variable. Individual analyses are done for these values despite the fact that the variables are interrelated. Bear in mind that results for one dependent variable are not independent of the other and that some groups (e.g. males and blacks) score high on both job success and making money. See tables 6 through 9 in the methodology section for regression models.

Multiple regression analysis is used to ascertain the influences, on beliefs, of background characteristics, early educational preparation and achievement, aspirations, and college attendance on beliefs. It is performed to determine whether or not a particular independent variable is a significant predictor when other variables are held constant. "Holding constant" is a type of statistical control by which we can separate the effect of each variable. By holding background variables such as race, sex, and income constant, we can separate the effects of a particular variable, free of influences from other variables.

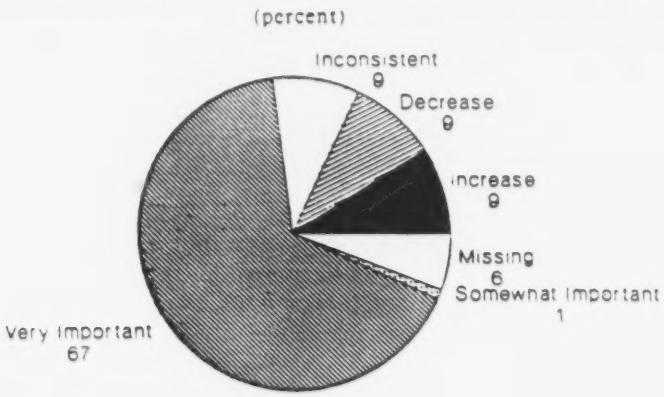
The regression model was estimated using arbitrary base groups for comparisons with dummy variables (using codes of 0-1 for predictors). The base group for each predictor in the model is in table 3, page 8. See tables 4 and 5 (also on page 8) for a listing of variables that showed significant differences between groups of students and the associated base group.

Table 2.--Patterns in student ratings of importance of work-related goals over time (1980-1986), by postsecondary education status in Fall 1982, by percent

	Nonstudent						Student					
	Consistent Importance			Decrease	Increase	Inconsistent	Consistent Importance			Decrease	Increase	Inconsistent
	Not	Some	Very				Not	Some	Very			
Success	0.0 (0.0)	0.8 (0.14)	38.1 (0.81)	9.2 (0.48)	8.5 (0.52)	11.4 (0.56)	0.0 (0.0)	0.7 (0.16)	66.8 (0.79)	8.6 (0.50)	9.2 (0.49	8.6 (0.45)
Steady work	0.0 (0.0)	1.0 (0.18)	47.2 (0.82)	9.7 (0.48)	13.4 (0.60)	1.6 (0.22)	0.0 (0.0)	1.9 (0.24)	70.2 (0.79)	11.0 (0.55)	13.3 (0.59)	1.1 (0.18)
Money	0.9 (0.15)	17.4 (0.65)	10.3 (0.51)	17.1 (0.65)	10.8 (0.50)	16.3 (0.69)	1.1 (0.16)	27.6 (0.75)	13.3 (0.59)	21.2 (0.71)	16.3 (0.61)	18.0 (0.69)

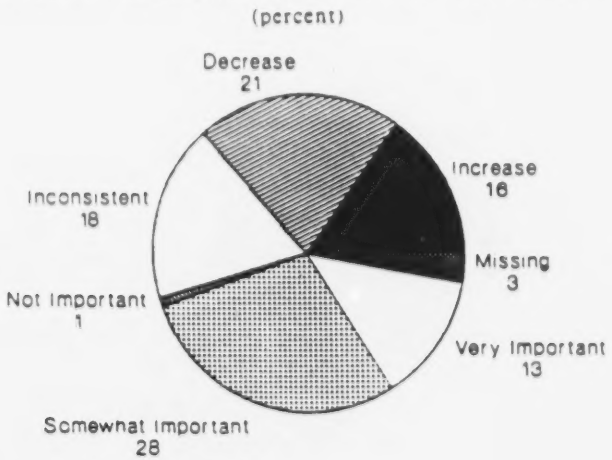
NOTE: Standard errors are in parentheses.
Rows do not add to 100, because estimates are based on different denominators, depending on the pattern of missing data. See methodology and technical notes.
SOURCE: HS&B Base Year (1980), 1st followup (1982), 2nd followup (1984), and 3rd followup (1986.

Figure 3.--Job success patterns over time among college students



SOURCE: HS&B 1980, 1982, 1984, 1986

Figure 4.--Make lots of money patterns over time among college students



SOURCE: HS&B 1980, 1982, 1984, 1986

Summary of Job Success Differences

Placing high importance on job success was significantly related to the following: sex, race, family income, parental education, student ability, high school grades, postsecondary education plans, private high school attendance (not Catholic), college attendance, region of the country, and previous beliefs about job success.

In particular, blacks, Hispanics, American Indians, and students from families with low ($8,000-15,000) and high (above $30,000) incomes were more likely to view job success as very important, compared with white and middle income students. In addition, students with some postsecondary education plans, who attended college, and who lived in the Northeast, mid-Atlantic, South Atlantic, or East North Central were more likely to view job success as very important, compared with students with no postsecondary education plans, who did not attend college or who lived in other regions. Also, females, students with very low family incomes (below $8,000), those whose parents had bachelors or doctoral degrees, those of high ability, those with low grades in high school (C and D), and students from private high schools not classified as Catholic were less apt to rate job success as very important, compared with males, students with average or high incomes, with parents who had only high school diplomas, those of low ability, those with high grades, and students from public high schools.

Summary of Making a Lot of Money Differences

Placing high importance on making a lot of money was significantly related to the following: sex, race, family income, socioeconomic status, student ability, high school grades, postsecondary education plans, college attendance, science course concentration, region of the country, and previous beliefs about making money.

In particular, Asians, blacks, and students from families with above average ($30,000 and above) incomes were more likely to view making a lot of money as very important, compared with whites, and low and middle income groups. Also, students of low and moderately low ability and low grades (C-D) were more likely to view making money as very important compared with students with high ability and students with relatively high grades (A-B). Students attending college and those in the Northeast region were more likely to view making money as very important, compared with those not in college and those in other regions of the country.

Females, students from low socioeconomic groups (1st and 2nd quartiles) or from very high socioeconomic groups (4th quartile) were less apt to rate making money as very important, compared with males and students from moderately high socioeconomic status (3rd quartile). Students with high grades (As and Bs), those with postsecondary education plans of less than 4 years of college, and science concentrators were less apt to rate making a lot of money as very important, compared with students with low grades, with no postsecondary education plans, and students not concentrating in science.

Methodology and Technical Notes

The estimates in this report were based on data from High School and Beyond base year questionnaire (1980), first (1982), second (1984), and third (1986) followup questionnaires of 12,139 high school students who were sophomores in 1980. The sample

Table 3.--Independent variables and base groups

Predictor	Base Group
Sex	Male
Race/Ethnicity	White
Family income	$20,000-$25,000
Parent education	High school diploma only
Socioeconomic status	Moderately high (3rd quartile)
Ability test quartile	Moderately high (3rd quartile)
Postsecondary plans	No postsecondary plans
Region of country	Pacific
High school type	Public school
High school program	"General" program
High school grades	B to C+ average grades
Math course pattern	Limited math courses
Science course pattern	Limited science courses
Postsecondary job/school status	High school graduates, no college
Base year	1980

SOURCE: HS&B 1980, 1982, 1984, 1986.

Table 4:--Job Success Differences

Groups rating job success as more important than base group	Percent	Groups rating job success as less important than base group	Percent
Black	9	Female	8
College plans--Advanced degree	8	High ability	7
College plans--BA/BS	6	Other private high school	7
Hispanic	5	Parent education (BS)	5
Income ($40,000-$50,000)	5	High school grades (C-D)	4
College plans--less-than-4-year college	5	Income (less than $8,000)	4
College plans--Vocational Education	5	Parent education (PhD)	3
In college 1984	5	High school grades (C)	2
American Indian	5		
Northeast Division	5		
South Atlantic Division	5		
Mid-Atlantic Division	4		
Income ($8,000-$15,000)	4		
Income (greater than $50,000)	3		
East North Central Division	3		
Income ($30,000-$40,000)	2		

SOURCE: HS&B 1980, 1982, 1984, 1986.

Table 5:--Making Money Differences

Groups rating making money as more important than base group	Percent	Groups rating making money as less important than base group	Percent
Income (greater than $50,000)	10	Female	15
Low ability	10	High school grades (A)	6
Black	9	Low socioeconomic status	6
Asian	9	High school grades (A-B)	5
High school grades (C-D)	7	Science concentrator	4
Income ($40,000-50,000)	6	Medium low socioeconomic status	3
Northeast Division	5	High socioeconomic status	3
In college 1984	5	College plans--less-than-4-year college	3
High school grades (C)	4	High school grades (B)	2
Moderate low ability	4		
Income ($30,000-$40,000)	4		

SOURCE: HS&B 1980, 1982, 1984, 1986.

consists of 2,189 high school dropouts and 9,952 high school graduates (for further information, see *HS&B Data File User's Manual for the Third Followup*, 1987). Estimates for the trend analysis are reported separately, by college student status in fall of 1982--either student in postsecondary education (n=6,304) or nonstudent (n=6,028). All estimates were weighted using PANELWT3. Nonresponse was moderate, with a maximum of 7 percent.

Specific items used were BB057A, BB057C, and BB057E (from 1980 base year questionnaire) and FY73A, FY73C and FY73E (from 1982 first followup questionnaire). Items from the second followup questionnaire include SY71A, SY71C and SY71E. In addition, items from the third followup questionnaire in 1986 include TY68A, TY68C and TY68E. The choices available to the HS&B respondents on these questions consisted of not important, somewhat important, and very important. Interestingly, only about 1 or 2 percent of 1980 sophomores believed at any time that job success and steady work were not important.

A change-over-time variable was created to show the percentage of student ratings remaining the same, increasing over time, decreasing over time, or being inconsistent over the time period 1980-1986. Only students with at least two responses in 1980, 1982, 1984 or 1986 were included in the analyses for this variable. Most students had at least two responses, thus most were included. Estimates are reported separately by college student status in fall of 1982--either nonstudent or student in postsecondary education. The six categories used were the following: (a) consistent, not important; (b) consistent, somewhat important; (c) consistent, very important; (d) decreased, important; (e) increased, important; (f) inconsistent, important. There are two exceptions: almost no students were consistent in believing that being a success was not important, and almost no students were consistent in believing that having steady work was not important. Thus, these categories were not used.

Students who reported "very important" at the sophomore or senior level were not included in the "increasing" category, and students reporting "not important" at the sophomore or senior level were not included in the "decreasing" category. Therefore, the six categories are not intended to sum to 100 percent. In addition, a larger percentage of nonstudents had missing responses (27-32 percent missing) compared with students (3-6 percent missing). This should be kept in mind when comparing percentages.

The objective in the multiple regression models was to identify which individual background characteristics were related to views students have on job success and making money.

As previously noted, the regression models were estimated using a base group for comparisons (dummy group: 0-1 predictors). By using these base groups, the effects of various predictors can be inferred by comparing group means over time and across groups. According to Kanouse et al (*Effects of Postsecondary Experiences on Aspirations, Attitudes, and Self-Conceptions*, Rand Corporation, 1980), such effects "can be estimated for a particular individual by comparing changes between the individual's outcome measures with estimates of the expected changes for individuals in a suitably chosen control group with similar background characteristics" (1980, p. 30). In this model, the effects of various background characteristics are seen as deviations from the pattern for similar individuals in a base or control group. Hence, the parameter estimates (raw coefficients, not betas) indicate the difference between the predictor variables and the base group (e.g. between blacks and whites) when the other independent variables are held constant.

Table 6 (page 13) displays the parameters of the regression model for the percentage of students saying job success was very important, for the full model and reduced model. Table 7 indicates the means and adjusted percentages for each variable. The percentage of students rating job success as very important was significantly related to sex, race,

family income, parental education, ability, postsecondary education plans, region of the country, private high school (not Catholic) attendance, high school grades, college attendance, and previous beliefs about job success.

Table 8 displays the parameters of the regression model (for full and reduced model) for the percentage of students saying making money was very important. Table 9 indicates the means and adjusted percentages for each variable. The percentage of students rating making money as very important was significantly related to sex, race, family income, parental education, SES, ability, postsecondary education plans, region of the country, high school grades, science course taking, college attendance, and previous beliefs about making money.

The regression analyses presented here were computed using PROC REG of the Statistical Analysis System (*SAS Users Guide. Statistics*, 1982, Cary, NC: SAS Institute, 1982). Although all models were based on covariance matrices computed using PANELWT3, the resulting standard error estimates were biased. Bias is due to the stratified design of HS&B. SAS PROC REG uses simple random sample techniques for computing standard errors. Simple random sample techniques bias the estimates of standard errors when the sample is as complex as HS&B.

The standard errors of the regression coefficients (b's) were adjusted by using a design effect (DEFT). For the full model, the standard errors were calculated using balanced repeated replication (BRR) procedures (*The BRRVAR Procedure: Documentation*, Wise, L., Palo Alto, CA: American Institutes for Research, 1983). The design effect for each predictor in the full regression model was the ratio of the BRR estimate and the weighted least squares (PROC REG) estimate. The t is calculated by dividing the weighted least squares b by the weighted least squares standard error multiplied by the DEFT.

On the regression tables, "wls" designates weighted least squares estimates, and "BRR" designates the BRR adjusted estimates. "DEFT" is the design effect for each variable: the ratio of the BRR standard error estimate and the wls standard error estimate. Tables 7 and 9 indicate the means and adjusted means for each variable. "Adjusted" indicates that the estimate is adjusted for the effects of all the other variables. For the second regression (table 8) the average design effect derived in the first regression (1.59) was used to calculate t values.

The R-squares in both regressions are rather low (.03 and .08). This indicates that the independent variables only contribute a small amount to the prediction of the dependent variables. Since regression coefficients are typically estimated with a large degree of error, this unreliability in the slopes weakens our ability to explain a large amount of the observed variance. In addition, there may be specification error in the model (e.g. exclusion of an important relevant variable) which may create problems in estimation. Variables not measured here (such as degree of motivation and drive possessed by a student) may be more potent predictors of beliefs about job success and making money. The inter-correlations among the independent variables were examined for evidence of multi-collinearity (e.g., correlations above .80) but no such evidence was found.

Comparisons cited in the text were selected because they were of substantive interest and because the differences seemed to be of practical importance, as well as being statistically significant. The results of the student's t test are given for every significant variable. Student's t test indicates how likely it is that the observed comparison arose from sampling error alone (e.g., no real differences in the population; only in the sample). When the t value is above 1.96, it is unlikely that the population comparison would show no difference, and the observed comparison is then reported, along with its t value. Comparisons include the estimates of the probability of a Type I error.

To obtain the confidence level for these comparisons, the p-value may be subtracted from one. For example, a $p<.01$ indicates a confidence of at least 99 percent (1 - .01 = .99).

There are hazards in reporting statistical tests for each comparison. First, the test may make comparisons based on large t statistics appear to merit special attention. This can be misleading, since the magnitude of the t statistic is related not only to the observed differences in means or percentages but also to the number of students in the specific comparison. Hence, a small difference compared across a large number of students would produce a large t statistic.

The second hazard is that, when making several t tests, it becomes increasingly likely that at least one of them will give a misleading result. When there is really no difference between the means or percentages being compared, there is still a 5 percent chance of getting a t value of 1.96 from sampling error. Although this 5 percent risk seems acceptable for a single t test, the risk of getting at least one t value of 1.96 in a series of t tests goes up alarmingly. The risk of finding a significant t score as a result of sampling error decreases for t scores above 1.96. There is a balance between making multiple tests, one of which can give misleading results, and making few tests under stringent control of error rates, a strategy likely to fail in finding differences when they exist.

Accuracy of Estimates

The statistics in this report are estimates derived from a sample. Two broad categories of error occur in such estimates: sampling and nonsampling errors. Sampling errors occur because observations are made only on samples of students, not on entire populations. Nonsampling errors occur not only in sample surveys but also in complete censuses or entire populations.

Nonsampling errors can be attributed to a number of sources: inability to obtain complete information about all students in all schools in the sample (e.g., some students or schools refused to participate, students participated but answered only certain items, etc.); ambiguities in definitions; differences in interpretation of questions; inability or unwillingness to provide correct information; mistakes in recording or coding data; and other errors of collection, processing, sample coverage, and estimation of missing data.

The accuracy of a survey result is determined by the joint effects of sampling and nonsampling errors. In surveys with sample sizes as large as those employed in the HS&B study, sampling errors generally are not the primary concern, except where separate estimates are made for relatively small subpopulations (e.g., Asians and American Indians). The standard errors in table 1 are typical of those for most estimates, except for some of the smaller groups, where the standard errors are sometimes large. All standard error estimates were calculated using Taylor residual procedures, and are available from the National Center for Education Statistics.

The nonsampling errors are difficult to estimate. Three major sources of nonsampling error were considered: nonresponse bias, data reliability, and validity of the data. The HS&B instrument response rates were all above 85 percent, and the item response rate within instruments for the items used to develop the estimates in this report were above 95 percent. The weights used to calculate the estimates were constructed in a fashion that compensated for instrument nonresponse. Investigations of the nonresponse bias found no major problems (see *High School and Beyond First Followup (1982) Sample Design Report* by R. Tourangeau, H. Williams, C. Jones, M. Frankel, and F. O'Brien, National Opinion Research Center, 1983).

The reliability and validity of the HS&B data have been examined in *Quality of Responses of High School Students to Questionnaire Items* by W. Fetters, P. Stowe, and J. Owings, National Center for Education Statistics, 1984. This study found that the reliability and validity of responses vary considerably depending on the nature of the item and the characteristics of the respondent. Contemporaneous, objective, and factually-oriented items are more reliable and valid than subjective, temporally remote, and ambiguous items; and older, white, or high-achieving students provide more reliable and valid responses than do younger, minority group, or low-achieving students. The estimates in this publication are reasonably reliable and valid.

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For More Information

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Table 6.--Regression models predicting views on job success

Variables	Full Model wls b	wls se	BRR b	BRR se	DEFT	t	Reduced Model wls b	wls se	t
R square	(.0331)						(.0325)		
Intercept	71.56	1.88					71.81	1.24	
Female	-7.27	0.48	-7.26	0.70	1.44	-10.46 #	-7.54	0.46	-11.50 #
Race/ethnicity:									
Hispanic	5.90	1.01	5.79	1.39	1.37	4.25 #	4.63	0.95	3.54 #
American Indian	4.88	2.24	4.81	2.66	1.19	1.83 @	4.98	2.11	1.98 *
Asian	2.03	2.02	1.90	2.68	1.33	0.76	2.04	1.93	0.79
Black	9.40	0.84	9.41	1.30	1.55	7.21 #	8.71	0.78	7.23 #
Family Income									
Less than $8000	-3.34	1.17	-3.47	2.15	1.83	-1.56	-3.85	1.06	-1.98 *
$8000-$15000	3.66	0.89	3.65	1.38	1.55	2.65 #	3.53	0.82	2.77 #
$15000-20000	0.90	0.87	0.93	1.44	1.65	0.62	0.79	0.83	0.58
$25000-30000	0.87	0.86	0.87	1.10	1.28	0.79	0.76	0.82	0.72
$30000-40000	2.47	0.85	2.45	1.13	1.33	2.18 *	2.19	0.80	2.06 *
$40000-50000	5.59	1.06	5.60	1.05	0.99	5.31 #	5.34	0.97	5.53 #
$50000 or more	4.05	1.05	4.04	1.52	1.45	2.66 #	3.48	0.93	2.58 #
Parent Education									
Lessthan Hi School	-0.99	0.92	-0.86	1.85	2.01	-0.53	-1.31	0.83	-0.79
Lessthan 2YR Voc	-0.83	1.10	-0.89	1.85	1.68	-0.45	-0.90	1.03	-0.52
Grtrthan 2YR Voc	-0.53	0.93	-0.55	1.66	1.78	-0.32	-0.27	0.86	-0.18
Lessthan 2YR Coll	1.53	0.94	-1.51	1.53	1.63	-1.00	-0.66	0.86	-0.47
Grtrthan 2YR Coll	-0.97	0.95	-1.08	1.51	1.59	-0.64	-0.96	0.85	-0.71
BS/BA	-4.83	0.94	-4.93	1.24	1.33	-3.89 #	-4.54	0.77	-4.45 #
MA	-2.44	1.13	-2.48	2.13	1.89	-1.14	-3.18	0.89	-1.90 @
Ph.D.	-3.42	1.28	-3.46	1.74	1.35	-1.97 *	-3.97	1.08	-2.71 #
SES low	-1.89	0.93	-2.06	1.62	1.74	-1.17	...	...	...
SES med low	-0.34	0.72	-0.39	1.08	1.51	-0.32	...	...	...
SES high	-2.08	0.86	-2.09	1.73	2.01	-1.21	...	...	...
Ability									
Low	-2.90	0.84	-2.98	1.75	2.10	-1.65 @	-2.75	0.76	-1.72 @
Mod. Low	-1.08	0.68	-1.13	1.10	1.62	-0.98	-0.61	0.64	-0.59
High	-6.99	0.68	-7.03	1.23	1.80	-5.68 #	-6.70	0.64	-5.85 #
Postsecondary Plans									
Voc.Educ.	5.26	0.78	5.17	1.25	1.59	4.22 #	5.21	0.74	4.44 #
Lessthan 4YR Coll	5.25	0.87	5.19	1.29	1.48	4.09 #	4.96	0.81	4.12 #
BA/BS	5.94	0.93	5.87	1.41	1.51	4.23 #	6.37	0.86	4.91 #
Adv.Degree	7.68	1.01	7.60	1.83	1.81	4.20 #	8.10	0.93	4.81 #

Table 6.--Regression models predicting views on job success--Continued

Variables	Full Model wls b	wls se	BRR b	BRR se	DEFT	t	Reduced Model wls b	wls se	t
Division									
Northeast	4.85	1.22	4.81	2.08	1.71	2.33 *	4.86	1.13	2.52 *
Mid.Atlantic	3.46	0.95	3.42	1.75	1.83	1.98 *	3.66	0.89	2.24 *
E.No.Central	2.99	0.89	2.93	1.28	1.44	2.33 *	3.22	0.85	2.64 #
W.No.Central	2.78	1.07	2.71	1.97	1.84	1.41	2.40	1.02	1.28
So.Atlantic	4.61	0.94	4.61	1.62	1.72	2.85 #	4.53	0.88	2.99 #
E.So.Central	3.05	1.22	2.98	2.36	1.93	1.29	4.05	1.15	1.82 @
W.So. Central	3.14	1.03	3.12	2.05	1.99	1.54	2.92	0.97	1.51
Mountain	0.52	1.30	0.46	1.82	1.39	0.28	0.04	1.22	0.02
Catholic HS	-0.29	0.94	-0.27	0.92	0.98	-0.32	0.17	0.90	0.19
Oth.Private HS	-7.30	1.34	-7.30	2.76	2.06	-2.65 #	-6.90	1.26	-2.65 #
High School Program									
Academic	-0.11	0.67	-0.11	1.11	1.66	-0.10	...	...	...
Vocational	0.23	0.67	0.28	1.21	1.79	0.19	...	...	...
High School Grades									
A	-1.79	1.31	-1.86	2.20	1.67	-0.81	-0.58	1.16	-0.30
A-B	-1.94	0.83	-1.92	1.34	1.61	-1.45	-1.55	0.77	-1.25
B	-0.18	0.66	-0.13	0.92	1.38	-0.19	-0.04	0.63	-0.05
C	-2.03	0.68	-1.98	1.12	1.65	-1.82 @	-2.21	0.64	-2.08 *
C-D	-3.94	1.04	-3.78	1.96	1.89	-2.01 *	-3.86	0.96	-2.14 *
Math Pattern									
Concentrator	3.02	1.58	3.29	2.48	1.57	1.22	...	...	...
College Bound	1.39	1.33	1.62	2.00	1.50	0.69	...	...	...
General	0.07	1.25	0.33	1.83	1.46	0.04	...	...	...
Science Pattern									
Concentrator	-0.15	1.18	-0.22	1.71	1.45	-0.09	...	...	...
College Bound	0.11	0.88	0.00	1.49	1.69	0.07	...	...	...
General	0.93	0.74	0.82	1.28	1.73	0.73	...	...	...
HS Dropout	-4.78	1.89	-5.12	3.18	1.68	-1.50	-4.16	1.35	-1.84 @
In College	5.16	0.63	5.21	0.93	1.46	5.58 #	5.18	0.59	5.99 #
Year									
1982	0.92	0.65	0.97	0.67	1.03	1.37	0.75	0.62	1.18
1984	0.05	0.65	0.12	0.80	1.23	0.06	-0.04	0.62	-0.05
1986	-6.88	0.65	-6.80	0.82	1.26	-8.34 #	-7.17	0.62	-9.13 #
				(Average DEFT	1.59)				

Note: # indicates p<.01, * indicates p< .05, and @ indicates p<.10.
SOURCE: HS&B 1980, 1982, 1984, 1986.

Table 7.--Means and adjusted percentages, job success

Variables	wls b	Predictor Means	Adjusted Percent	Variables	wls b	Predictor Means	Adjusted Percent
Intercept	71.81						
Males			79.48	Division			
Females	-7.54	0.52	71.94	Northeast	4.86	0.06	77.40
				Mid.Atlantic	3.66	0.16	76.20
Race/Ethnicity				E.No.Central	3.22	0.21	75.76
Hispanic	4.63	0.06	78.84	W.No.Central	2.40	0.09	74.94
American Indian	4.98	0.01	79.19	So. Atlantic	4.53	0.17	77.07
Asian	2.04	0.01	76.25	E.So.Central	4.05	0.06	76.59
Black	8.71	0.12	82.92	W.So.Central	2.92	0.10	75.46
White			74.21	Mountain	0.04	0.05	72.58
				West			72.54
Family Income							
Less than $8000	-3.85	0.06	70.04	Public HS			75.82
$8000-15000	3.53	0.15	77.42	Catholic HS	0.17	0.07	75.99
$15000-20000	0.79	0.14	74.68	Oth.Private HS	-6.90	0.03	68.92
$20000-25000			73.89				
$25000-30000	0.76	0.15	74.65	High School Program			
$30000-40000	2.19	0.17	76.08	General			75.59
$40000-50000	5.34	0.09	79.23	Academic	-0.11	0.51	75.48
$50000 or more	3.48	0.11	77.37	Vocational	0.23	0.27	75.82
Parent Education				High School Grades			
Lessthan Hi School	-1.31	0.09	75.76	A	-0.58	0.04	76.01
HS Graduate			77.07	A-B	-1.55	0.14	75.04
Lessthan 2YR Voc	-0.90	0.05	76.17	B	-0.04	0.25	76.55
Grtrthan 2YR Voc	-0.27	0.09	76.80	B-C			76.59
Lessthan 2YR Coll	-0.66	0.09	76.41	C	-2.21	0.22	74.38
Grtrthan 2YR Coll	-0.96	0.09	76.11	C-D	-3.86	0.07	72.73
BS/BA	-4.54	0.14	72.53				
MA	-3.18	0.09	73.89	Math Pattern			
Ph.D.	-3.97	0.06	73.10	Concentrator	3.02	0.10	77.73
				College Bound	1.39	0.40	76.10
SES low	-1.89	0.22	74.78	General	0.07	0.47	74.78
SES medlow	-0.34	0.25	76.33	Limited			74.71
SES modhigh			76.67				
SES high	-2.08	0.27	74.59	Science Pattern			
				Concentrator	-0.15	0.11	75.00
Ability				College Bound	0.11	0.30	75.26
Low	-2.75	0.17	75.56	General	0.93	0.46	76.08
Mod. Low	-0.61	0.23	77.70	Limited			75.15
Mod. High			78.31				
High	-6.70	0.31	71.61				
				HS Dropout	-4.16	0.02	68.21
Postsecondary Plans				HS Graduate			72.37
No Plans			70.54	In College	5.18	0.64	77.55
Voc. Educ.	5.21	0.20	75.75				
Lessthan 4Yr Coll	4.96	0.18	75.50	Year 1980			77.21
BS/BA	6.37	0.24	76.91	Year 1982	0.75	0.25	77.96
Adv.Degree	8.10	0.20	78.64	Year 1984	-0.04	0.25	77.17
				Year 1986	-7.17	0.25	70.04

NOTE: b values were copied from the reduced model (see table 6). Predictor means were calculated as the weighted means of the dummy variables in the model. Adjusted percents were calculated by applying the predictor means or dummy variable values, for each set of predictors in the equation.

SOURCE: HS&B 1980, 1982, 1984, 1986.

Table 8.--Regression model predicting views on making money

Variable	Full Model wls b	Full Model wls se	Full Model t**	Reduced Model wls b	Reduced Model wls se	Reduced Model t**
R Square	(0.077)			(0.076)		
Intercept	37.43	1.92		36.19	1.54	
Female	-14.78	0.49	-18.87 #	-14.80	0.49	-18.99 #
Race/Ethnicity						
Hispanic	1.65	1.03	1.01	1.70	1.03	1.04
American Indian	1.76	2.28	0.49	1.84	2.28	0.51
Asian	8.51	2.06	2.61 #	8.78	2.05	2.69 #
Black	9.20	0.85	6.77 #	9.31	0.85	6.89 #
Family Income						
Less than $8000	2.58	1.19	1.36	2.65	1.19	1.40
$8000-15000	0.66	0.91	0.46	0.72	0.91	0.50
$15000-20000	1.26	0.89	0.89	1.21	0.89	0.86
$25000-30000	0.45	0.87	0.32	0.49	0.87	0.35
$30000-40000	3.98	0.87	2.88 #	4.01	0.87	2.90 #
$40000-50000	5.94	1.08	3.47 #	5.97	1.08	3.48 #
$50000 or more	10.20	1.07	6.02 #	10.12	1.07	5.95 #
Parent Education						
Lessthan HiSchool	2.05	0.94	1.37	2.06	0.94	1.38
Lessthan 2YR Voc	0.20	1.12	0.11	0.05	1.12	0.03
Grtrthan 2YR Voc	-1.99	0.95	-1.32	-2.02	0.95	-1.34
Lessthan 2YR Coll	-2.37	0.96	-1.56	-2.41	0.96	-1.58
Grtrthan 2YR Coll	0.04	0.97	0.03	0.07	0.97	0.05
BS/BA	-1.16	0.96	-0.76	-1.23	0.96	-0.81
MA	1.14	1.15	0.63	1.09	1.15	0.60
Ph.D.	3.84	1.31	1.85 @	3.48	1.30	1.68 @
SES low	-6.18	0.94	-4.12 #	-6.28	0.94	-4.20 #
SES med low	-3.31	0.73	-2.85 #	-3.35	0.73	-2.89 #
SES high	-2.98	0.87	-2.15 *	-2.99	0.87	-2.16 *
Ability						
Low	9.98	0.85	7.38 #	9.72	0.83	7.37 #
Mod. low	4.13	0.70	3.74 #	4.14	0.69	3.77 #
High	-1.69	0.70	-1.53	-1.73	0.69	-1.58
Postsecondary Plans						
Voc. Educ.	-0.99	0.80	-0.78	-1.06	0.80	-0.83
Lessthan 4Yr Coll	-2.92	0.88	-2.08 *	-2.84	0.88	-2.03 *
BA/BS	-1.56	0.95	-1.04	-1.38	0.93	-0.93
Adv.Degree	-0.54	1.03	-0.33	-0.42	1.01	-0.26

Table 8.--Regression model predicting views on making money--Continued

Variable	Full Model wls b	Full Model wls se	Full Model t**	Reduced Model wls b	Reduced Model wls se	Reduced Model t**
Division						
Northeast	4.82	1.24	2.45 *	4.51	1.23	2.31 *
Mid.Atlantic	2.26	0.97	1.46	2.17	0.96	1.42
E.No.Central	-1.49	0.91	-1.03	-1.55	0.91	-1.07
W.No.Central	-1.08	1.09	-0.62	-1.06	1.09	-0.61
So. Atlantic	0.40	0.96	0.26	0.26	0.96	0.17
E.So.Central	-2.68	1.24	-1.36	-2.75	1.24	-1.40
W.So.Central	0.76	1.05	0.46	0.63	1.04	0.38
Mountain	0.58	1.33	0.28	0.62	1.33	0.29
Catholic HS	-0.88	0.95	-0.58	---	---	---
Oth.Private HS	-3.34	1.36	-1.54	---	---	---
High School Program						
Academic	0.12	0.68	0.11	---	---	---
Vocational	-1.73	0.69	-1.58	---	---	---
High School Grades						
A	-6.24	1.34	-2.94 #	-6.26	1.32	-2.98 #
A-B	-5.45	0.85	-4.05 #	-5.38	0.84	-4.03 #
B	-2.27	0.67	-2.12 *	-2.24	0.67	-2.10 *
C	4.37	0.69	4.00 #	4.35	0.68	4.02 #
C-D	7.29	1.06	4.34 #	7.28	1.05	4.36 #
Math Pattern						
Concentrator	-1.35	1.61	-0.53	---	---	---
College Bound	-0.73	1.35	-0.34	---	---	---
General	-0.57	1.28	-0.28	---	---	---
Science Pattern						
Concentrator	-4.37	1.20	-2.30 *	-4.31	1.13	-2.40 *
College Bound	-1.21	0.90	-0.85	-1.05	0.86	-0.77
General	-0.55	0.75	-0.46	-0.55	0.74	-0.47
HS Dropout	-2.12	1.93	-0.69	-2.08	1.93	-0.68
In College	4.65	0.65	4.54 #	4.71	0.64	4.63 #
Year						
1982	-1.28	0.66	-1.21	-1.27	0.66	-1.21
1984	-5.92	0.66	-5.61 #	-5.93	0.66	-5.65 #
1986	-11.28	0.66	-10.69 #	-11.27	0.66	-10.74 #

Note: # indicates P<.01, * indicates p<.05, and a indicates p<.10.
** The average design effect derived in the previous regression (1.59) was used to calculate t values.
SOURCE: HS&B 1980, 1982, 1984, 1986.

Table 9.--Means and adjusted percentages, making money

Variables	wls b	Predictor Means	Adjusted Percent	Variables	wls b	Predictor Means	Adjusted Percent
Intercept	36.19						
				Division			
Males			34.27	Northeast	4.51	0.06	30.98
Females	-14.80	0.52	19.47	Mid.Atlantic	2.17	0.16	28.64
				E.No. Central	-1.55	0.21	24.92
Race/Ethnicity				W.No. Central	-1.06	0.09	25.41
Hispanic	1.70	0.06	27.02	So. Atlantic	0.26	0.17	26.73
American Indian	1.84	0.01	27.16	E.So.Central	-2.75	0.06	23.72
Asian	8.78	0.01	34.10	W.So.Central	0.63	0.10	27.10
Black	9.31	0.12	34.63	Mountain	0.62	0.05	27.09
White			25.32	West			26.47
Family Income				Public HS			26.82
Less than $8000	2.65	0.06	26.52	Catholic HS	-0.88	0.07	25.94
$8000-15000	0.71	0.15	24.58	Oth.Private HS	-3.34	0.03	23.48
$15000-20000	1.21	0.14	25.08				
$20000-25000			23.87	High School Program			
$25000-30000	0.49	0.15	24.36	General			27.06
$30000-40000	4.01	0.17	27.88	Academic	0.12	0.51	27.18
$40000-50000	5.97	0.09	29.84	Vocational	-1.73	0.27	25.33
$50000 or more	10.12	0.11	33.99				
				High School Grades			
Parent Education				A	-6.26	0.04	20.53
Lessthan Hi School	2.06	0.09	28.75	A-B	-5.38	0.14	21.41
HS Graduate			26.69	B	-2.24	0.25	24.55
Lessthan 2YR Voc	0.05	0.05	26.74	B-C			26.79
Grtrthan 2YR Voc	-2.02	0.09	24.67	C	4.35	0.22	31.14
Lessthan 2YR Coll	-2.41	0.09	24.28	C-D	7.28	0.07	34.07
Grtrthan 2YR Coll	0.07	0.09	26.76				
BS/BA	-1.23	0.14	25.46	Math Pattern			
MA	1.09	0.09	27.78	Concentrator	-1.35	0.10	25.99
Ph. D.	3.47	0.06	30.16	College Bound	-0.73	0.40	26.61
				General	-0.57	0.47	26.77
SES low	-6.28	0.22	23.40	Limited			27.34
SES med low	-3.35	0.25	26.33				
SES mod high			29.68	Science Pattern			
SES high	-2.99	0.27	26.69	Concentrator	-4.30	0.11	23.38
				College Bound	-1.05	0.30	26.63
Ability				General	-0.55	0.46	27.13
Low	9.72	0.17	34.25	Limited			27.68
Mod. low	4.14	0.23	28.67				
Mod. high			24.53	HS Dropout	-2.07	0.02	21.63
High	-1.73	0.31	22.80	HS Graduate			23.70
				In College	4.70	0.64	28.40
Postsecondary Plans							
No Plans			27.79				
Voc. Educ.	-1.06	0.20	26.73	Year 1980			31.27
Lessthan 4Yr Coll	-2.84	0.18	24.95	Year 1982	-1.27	0.25	30.00
BS/BA	-1.38	0.24	26.41	Year 1984	-5.93	0.25	25.34
Adv.Degree	-0.42	0.20	27.37	Year 1986	-11.27	0.25	20.00

NOTE: b values were copied from the reduced regression model (see table 8). Predictor means were calculated as the weighted means of the dummy variables in the model. Adjusted percentages were calculated by applying the predictor means or dummy variable values, for each set of predictors in the equation.

SOURCE: HS&B 1980, 1982, 1984, 1986.